

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 March 2005 (10.03.2005)

PCT

(10) International Publication Number
WO 2005/021800 A3

(51) International Patent Classification⁷: C12Q 1/68

(21) International Application Number:
PCT/US2004/026857

(22) International Filing Date: 17 August 2004 (17.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/497,222 22 August 2003 (22.08.2003) US
60/543,784 11 February 2004 (11.02.2004) US

(71) Applicant (for all designated States except US): SIRNA
THERAPEUTICS, INC. [US/US]; 2950 Wilderness
Place, Boulder, CO 80301 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): RADKA, Susan
[US/US]; 7933 Orion Way, Arvada, CO 80007 (US).
ZINNEN, Shawn [US/US]; 2378 Birch Street, Denver,
CO 80207 (US). JADHAV, Vasant [IN/US]; 1951 Grand-
view Avenue, Aptment #A4-B, Boulder, CO 80302 (US).
MCSWIGGEN, James [US/US]; 4866 Franklin Drive,
Boulder, CO 80301 (US). VAISH, Narendra, K. [IN/US];
1313 Williams Street, #503, Denver, CO 80218 (US).

(74) Agent: GREENFIELD, Michael, S.; McDonnell
Boehnen Hulbert & Berghoff LLP, 300 South Wacker
Drive, Suite 3100, Chicago, IL 60606 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
21 April 2005

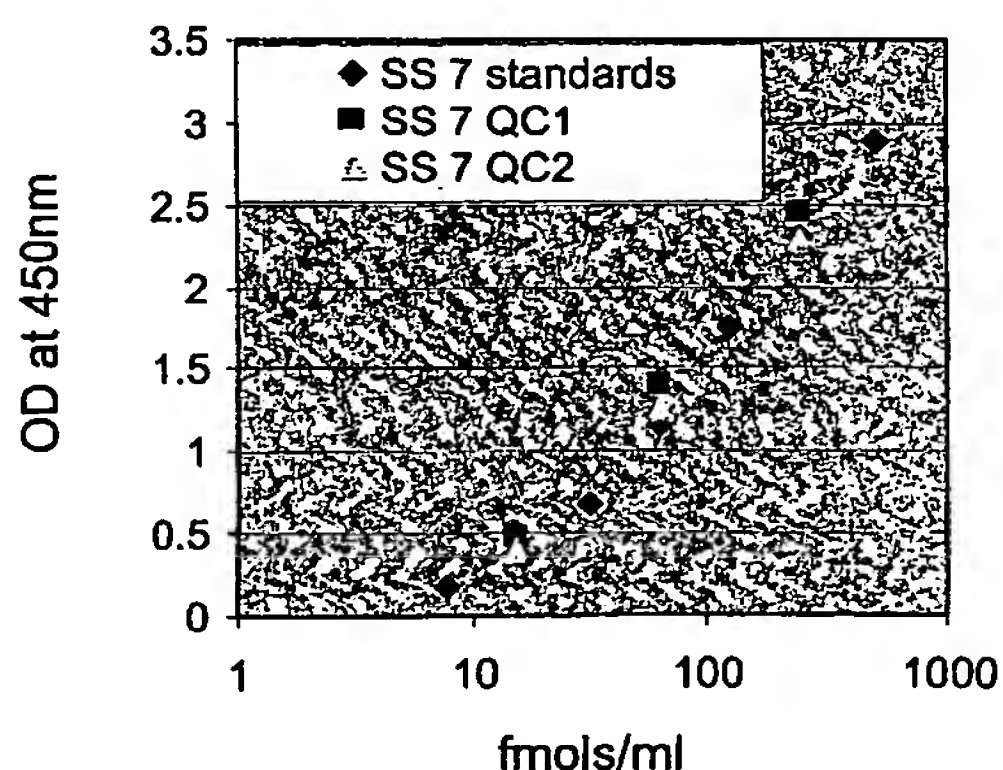
(48) Date of publication of this corrected version:
23 June 2005

(15) Information about Correction:
see PCT Gazette No. 25/2005 of 23 June 2005, Section II

[Continued on next page]

(54) Title: DETECTION AND QUANTITATION OF NUCLEIC ACID MOLECULES IN BIOLOGICAL SAMPLES

siNA Stab 7 Single Stranded
Quality Control Sample



(57) Abstract: The present invention concerns processes for the de-
tection and quantitation of nucleic acid molecules, polynucleotides,
and/or oligonucleotides in a sample using hybridizationdetection
assays, antibody-mediated recognition assays, nucleic acid
sensor molecules, chromatographic assays, and/or electrophoresis
assays. The present invention specifically concerns processes
for the detection and quantitation of double stranded nucleic acid
molecules, polynucleotides, and/or oligonucleotides in a sample
using hybridization-detection assays. The nucleic acid molecules,
polynucleotides, and/or oligonucleotides can include molecules
that mediate RNA interference, such as short interfering nucleic
acid (siNA), short interfering RNA (siRNA), double-stranded RNA
(dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA)
molecules. The nucleic acid molecules, polynucleotides, and/or
oligonucleotides can include nucleic acid aptamers, enzymatic
nucleic acid molecules, decoys, antisense, 2',5'-oligoadenylate
molecules, triplex forming oligonucleotides or any other nucleic
acid molecule of interest. The present invention also concerns
kits that allow for the detection and quantitation of nucleic acid
molecules, polynucleotides, and/or oligonucleotides in a sample.

WO 2005/021800 A3



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.